

Title: “The Silent Epidemic of Peripheral Neuropathy”

Host: Dale Connelly

Specialists: Ahmet Hoke, M.D., Ph.D.
Professor, Neurology and Neuroscience
Director, Neuromuscular Division



Dale: “From the Johns Hopkins University Brain Science Institute...

Dr. Hoke: “Currently there are more than 20 million people with Peripheral Neuropathy and yet it doesn’t attract the same attention as other neuro-degenerative disorders. Peripheral neuropathy is like a silent epidemic in this country and it’s getting worse because of the aging population and also increased obesity and diabetes.”

Dale: “Dr. Ahmet Hoke is a professor of neurology at Johns Hopkins University and the director of its neuromuscular division. His team is working on ways to help treat people suffering from damage to the peripheral nerve—the nerve that connects the brain and the spine to the rest of the body.

Today on Brain Talk: hope for patients suffering from peripheral neuropathy.

Currently, there is no cure or prevention for peripheral neuropathy. It can affect muscles and internal organs. It can be triggered by a genetic predisposition, by diabetes, autoimmune diseases, or even alcohol abuse.”

Dr. Hoke: “Most Peripheral Neuropathies start in the feet and the reason for that is the longest nerves in our body are the ones that go to our feet because they originate in the lumbar area, in your lower back, and extend more than 3 feet down to your foot. These nerves start to degenerate from the toes up and patients may experience numbness, tingling, pins and needles sensations, sometimes electric shock like sensations, or even a burning or an ice cold type of pain. In other patients where there’s involvement of the nerve fibers that goes to your joints and allows you to perceive your environment and those patients have trouble with their balance or they can walk like a drunk for example.”

Dale: “And, according to Dr. Hoke, about 80% of cancer patients that undergo chemotherapy also develop peripheral neuropathy.”

Dr. Hoke: “One of the biggest advances in cancer chemotherapy in the last 10/20 years is that we can cure many more patients, including breast cancer patients, however many of drugs that are commonly used can cause nerve degeneration, which results in peripheral neuropathy. This peripheral neuropathy manifests itself as numbness, tingling and pain in these patients and even though they may be cured of their cancer, they may be left with painful symptoms for the rest of their lives.”

Dale: “More specifically, Dr. Hoke and his team are exploring a way to interrupt nerve damage that’s caused by the breast cancer drug Taxol. In their lab, they combined 2,000 drugs, one by one, with the cancer cells and the Taxol.”

Dr. Hoke: “One of the drugs that we found, that prevents nerve degeneration, turns out to be an old antioxidant that was initially found in the 1950's and since then has been used in certain pet foods, primarily dog food to prevent spoilage of the dog food.”

Dale: “Experiments with mice show that this dog food preservative prevents two-thirds of nerve degeneration. That would be a big improvement in a patient’s quality of life.

Dr. Hoke and his team are now working with biotech companies and the NIH to try to move these discoveries forward.”

Dr. Hoke: “One of the biggest challenges in developing therapies is that pharmaceutical companies do not want to get involved in a drug that they can’t patent and because this is an old drug that’s been in the market for a long time, it’s difficult for them to make money on it. So we’re working to get NIH support to do the necessary safety studies so we can move into testing them in patients, hopefully in a couple of years.”

Dale: “For more information on peripheral neuropathy, log onto brainscienceinstitute.org. I’m Dale Connelly, and from Johns Hopkins University... this is Brain Talk.

[Learn more about Dr. Hoke](#)

[Learn more about Johns Hopkins Peripheral Nerve Clinic](#)

[Make an appointment with Dr. Hoke](#)

[The Foundation for Peripheral Neuropathy](#)

The foundation works to educate the public and healthcare professionals, provide state-of-the-art treatment for patients with peripheral neuropathy, and will be the catalyst for advancing innovative therapeutic developments and accelerating a cure for painful neuropathies

<http://www.brainscienceinstitute.org>